ENVIRONMENTAL & SAFETY

What Boaters Can Do To Be Environmentally Friendly

protecting the environment comes naturally to most boaters and others who practice being a good neighbor, on land or water. On water, especially, every action or sound a boater makes impacts others sharing the waterway, the water itself, marine life living in it, and the near-shore and shoreline ecosystem and inhabitants. In almost all cases, a commonsense approach while boating will help protect the aquatic environment ... and the following pages suggest that approach.

Clean water is the foundation for enjoyable boating. It's up to those who appreciate and recognize the privilege of using the waterways to protect this resource now and for future generations.

Manufacturers of boats and related products are working to help safeguard the environment. Through research and development, testing and employing technology of related industries, propulsion systems are gaining efficiency, waste treatment systems are becoming more effective, and maintenance products are getting "greener." Industry workers understand their livelihood depends on clean water, and helping keep it that way is simple the right thing to do.

This brochure has been adapted from "Your Boat and the Bay," originally written by the staff of the Chesapeake Bay Foundation and edited by Margaret Podlich. It has been augmented by material provided by The Izaak Walton League of America and other outdoor recreation and conservation organizations.

The "Top Ten" List of Eco-Boating Practices

1. Observe local and federal marine toilet rules.
2. Always pump out on shore if you have a holding tank.
3. Know and use legal bottom paints.
4. Use biodegradable cleaning agents when possible.
5. Don't litter on water. Bring it home.
6. When fueling, don't top tanks and mop up fuel spills.
7. Watch your wake and propeller wash.
8. Keep your motors finely tuned.
9. Control your bilge water.
10. If fishing, practice "Catch and Release."

More Info

A project of:

The Foundation for Recreational Boating Safety & Education
The Environmental Council for the Boating Industry

or

Contact: Americans for Responsible Recreation

National Marine Manufacturers Association
200 E. Randolph Dr. # 5100, Chicago, IL 60601 - 6528

Environmental & Safety

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INTRODUCTION

Boats have been a part of life in America for hundreds of years, but never in numbers as large as today. Boats contribute to the quality of life, but ironically, they can also play a role in stressing the ecosystem. While the effect of a single boat on a body of water may seem insignificant, multiply it by the millions of boats in use and such effects become both significant and apparent.

As we realize the limits of use waterways can tolerate, and how close we are to those limits, it becomes essential for each of us to follow the best possible environmental practices in using and maintaining our boats on and around the water.

Marine sanitation, bottom painting, surface cleaning, engine maintenance, and general boat operating habits are all factors that can impact water quality, shoreline stability and marine life.

The information and suggestions in this pamphlet will assist you in combining the best of both worlds—enjoying the experience of boating while helping to safeguard the quality of this fragile environment.

MARINE SANITATION DEVICES (MSDs)

Like lawn fertilizers and manure, human waste contains nutrients that contribute to legal blooms and oxygen depletion. Human waste alson contains disease-carrying bacteria, which can transmit diseases to swimmers and can cause closure of shellfish beds. For these reasons, it is very important to keep your waste out of the water. To help you do this, here is some information about marine sanitation devices (MSDs) and pump-out stations.

Perhaps no other boating issue of recent years has produced as much confusion and irritation as regulations regarding the installation and use of MSDs.

According to Coast Guard regulations, boats are not required to be equipped with a toilet or marine head. However, if a head is installed (portable toilets are not considered installed toilets and are not subject to MSD regulations), it must be equipped with an operable MSD that is built and certified by the Coast Guard to meet Environmental Protection Agency standards. Heads that discharge raw sewage directly over the side are illegal.

It is illegal to discharge raw sewage from a vessel into any U.S. territorial water within three miles of shore. In some localities no discharge of **any** onboard waste is allowed; in other areas discharge of **treated** waste is allowed, though it should be discharged offshore. The current lack of pumpout facilities hinders compliance with no-discharge laws. A new federal program is making funding available for more shoreside pumpouts, so boat owners should encourage local officials to expedite the process.

THE DIFFERENT MSDs

Type I MSDs treat sewage by various means and then discharge the effluent into the water. By definition, a Type I MSD "produces an effluent having a fecal cloakroom bacteria count not greater that 1,000 per 100 milliliters and no visible floating solids."

Type II MSDs are similar to Type Is, but they must meet a higher level of sewage treatment ("a fecal coliform bacteria count not greater that 200 per 100 milliliters and suspended solids not greater than 150 milligrams per liter"). Most Type IIs use some combination of chemical, biological, electrical, or incinerating methods in the treatment process. Many of these systems use chlorine or other disinfectants.

Type III MSDs are designed to prevent the discharge of human waste in any form from boats. These devices include recirculating and incinerating MSDs and holding tanks. Holding tanks are the most common kind of Type III MSD found on recreational boats.

The Type III system, when emptied at an onshore pump-out station, may be the best environmental alternative because it produces no direct chemical or water pollution. In addition, the total cost of installing and operating a Type III MSD on a boat is comparatively low, even when including possible pump-out fees. However, depending upon local regulations and regulations of intended boating destinations, installation of a Type I or II device coupled to a holding tank, may provide the best choice for certain boat owners. To help decide, consult a local MSD dealer or the manufacturers of various MSD products.

In some states or water management districts certain areas may be designated as "no-discharge zones." In such zones, Type III MSDs or "porta-potties" are the only acceptable waste disposal systems, since they are the only types that do not discharge into the water.

ACTIONS

1. Use holding tanks or "porta-potties" and onshore pumping stations to keep your sewage out of the water. For a list of pump-out stations, contact your state boating law administrator.
2. Select and use holding tank deodorant chemicals with care.
3. Keep your MSD properly maintained.
4. Encourage the development of more onshore pumpout stations. Let the owner of your marina know that you and other boaters need a local pump-out facility and will use the station if it is installed. Federal funds have recently become available for establishing pumpout facilities.
5. When planning a trip, check the location of pump-out facilities on your route or near your destination and use them. Consult cruising guides and boating almanacs for pump-out facilities when traveling beyond your home port.
6. When you are docked, use onshore restroom and bathhouse facilities. This will minimize the need to pump out your system.
7. If you have a Type I or II device, always flush your system in open water, preferably in a depth of 20 feet or more. This will allow natural tidal or other water movements to disperse the waste materials more quickly and completely. Additionally, discharging in deep rather than shallow waters greatly reduces damage to shellfish beds.

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ANTI-FOULING PAINTS

There is no question that keeping your boat's hull clean and free of growth is important. Better boat speed and lower fuel costs are two major advantages of doing so. There are, however, other considerations.

Anti-fouling paints work by releasing toxic chemicals from the hull into the surrounding water. In general, the more effective the paint, the more toxic its ingredients. Copper-based paints, used for decades, have proven adequate to keep a hull clean for a year or more, and they contain fewer toxic metallic compounds.

Newer, more toxic organotin anti-fouling paints were restricted by national legislation in 1988. Organotin paints include the familiar tributyltin (TBT)-based anti-fouling paints. Federal law now prohibits the use of any TBT paints on boats under 25 meters long, with two exceptions: Aluminum-hulled boats and aluminum outboard motors or lower drive units may be painted with an approved TBT coating. In order to be approved, the organotin paint must have a certain restricted release rate. In addition, in many states, only boatyards with special licenses can purchase and apply TBT paints. If you would like more information about the TBT restrictions, please contact your state boating law administrator.

Tin-based paints are very effective at killing growth on the bottom of boats. Unfortunately, the highly toxic tin is also absorbed by fish through their gills and accumulates to high levels in sediment. Oysters, clams and fish are threatened by this paint as well.

ACTIONS

1. Use the right paint for the job. Double check with your marine painting professional to determine if there are alternatives and choose the most environmentally friendly one.

2. When your boat is being scraped and/or sanded, use a vacuum sander or place a dry cloth underneath to catch paint scrapings and dust. Treat the dust/scrapings as hazardous waste; consult the yard manager or local authorities for safe disposal instructions. If you don't have a drop cloth, sweep up old scrapings and dispose of them the same way. If the work is being done by a boatyard, ask them to follow these procedures when working on your boat.

Keep all paints, thinners, brush cleaners, etc., away from the water and dispose of them carefully. The possibility exists of chemicals being washed into the water from work areas.

LITTER

Plastic and litter not only ruin the natural beauty of boating waters, they can also injure or kill aquatic life. Many water systems are already under severe biological stress.

The Marpol Treaty is a new international law intended to reduce pollution of marine environments worldwide. Annex V of this treaty places graduated restrictions on the disposal of garbage and trash at sea. Dumping of any material or waste in lakes, rivers, sounds or bays within three miles from shore is strictly forbidden. Plastics are prohibited from being thrown overboard anywhere in the world.

ACTIONS

1. Do not throw any litter overboard. Bring everything ashore, including your soda cans and "biodegradable" food waste.

2. Install a garbage can on your boat, and use it.

3. Pick up someone else's litter and bring it back to shore to dispose of properly.

4. When guests come aboard your boat, let them know about your commitment to clean water and that you have a boat policy not to throw trash overboard.

5. Switch to reusable cups and plates on your boat.

6. If something accidentally blows overboard, go back and pick it up. Use it as man overboard practice!

7. Under the Marpol Treaty, as of July 31, 1990, boats more than 26 feet in length must display a placard that informs crew members and passengers of the rules and penalties governing disposal of trash and garbage from vessels.

   In addition to the placard requirement, the regulations require a written waste management plan for U.S. vessels 40 feet or longer that operate in coastal waterways beyond three nautical miles of shore, engage in commerce, or have a galley and berthing quarters. The plan must describe the procedures for collecting, processing, storing, and discharging garbage as well as designating the person responsible for carrying out the plan.

8. For more information on the Marpol Treaty, contact:

Center for Marine Conservation
1725 DeSales Street, NW
Suite 500
Washington, DC 20036
(202) 429-5609

WAKES AND WAVES

Boat wakes contribute to shoreline erosion, especially in smaller creeks and coves. They can also stir up bottom sediments and reduce light essential to submerged aquatic vegetation, such as sea grasses.

ACTIONS

1. Reduce your speed before reaching speed buoys in small rivers and creeks.

2. Occasionally look back at your wake. What does it took like when it reaches the shoreline? Is it breaking, and creating a big impact? Or is it gently easing up the shoreline? Adjust your boat speed to minimize your wake.

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BOAT CLEANERS

Many products are available for cleaning and maintaining decks, topsides, teak, and brightwork, and their toxicities vary widely. Since much of this kind of maintenance work is done when your boat is in the water, careful use of these substances is essential to keep them from washing overboard. Some cleaners, bleaches, teak cleaners, paint thinners, etc. are toxic and should be handled in an intelligent and safe manner. Read the labels carefully and handle the products accordingly. Do not assume that a product labeled "biodegradable" is safe; some present clear danger to users. A number of maintenance product manufacturers list toll-free "800" phone line numbers on labels; call them with questions about product composition and uses.

ACTIONS

1. Use biodegradable chemical boat cleaners whenever possible.

2. If you use chemical products on your boat, minimize their use while your boat is in the water. If this cannot be avoided, plug your scuppers and wipe up any spills or residue.

3. Buy paints, varnishes, and thinners in sizes you can use within a year. That way you won't have to dispose of any stale product.

4. To learn how to dispose of boat chemicals, unused bottom paint and other household hazardous wastes, contact your local waste hauler or state environmental agency.

ENGINE MAINTENANCE

Maintaining your outboard or inboard engine can pose some special problems, due mostly to the materials involved—cleaners, oil, transmission fluid and antifreeze, to name a few. Oil can be a particular problem since a single quart, when spilled, can cover an area of up to two acres, equivalent to nearly three football fields of water surface.

The discharge of oil causing discoloration or leaving a film or sheen on the water is prohibited by federal law, and also requires the display of an oil pollution placard on boats 26-feet and longer.

FOR INBOARDS AND OUTBOARDS

ACTIONS

1. Keep your engine well-tuned. It will use fuel more efficiently and reduce your fuel consumption. It will also discharge fewer pollutants into waterways.

2. Inspect the rubber fuel lines regularly. The alcohol content of unleaded fuels has a tendency to deteriorate older fuel line hoses, sometimes in a matter of months. Should signs of deterioration appear—dry and cracked or soft and mushy spots—replace them immediately with any hose marked "USCG type A." The Coast Guard has announced its approval of an alcohol-resistant fuel line hose, identified as SAE J 1527, which is now commonly in use.

3. Keep your use of engine cleaners to a minimum. Their chemical ingredients are often highly

toxic. Steam cleaning, if available, may be a better alternative.

4. For boat storage, avoid disposable plastic covers. Use polyester covers instead, which last several seasons, or canvas covers which last even longer.

FOR INBOARDS MOTORS

ACTIONS

1. When changing your oil, wipe up spills immediately and be extremely careful to catch all old oil in a container for onshore recycling. Many marinas have oil recycling drums. If yours does not, ask for one.

2. Consider placing a bilge "pillow" (an oil-absorbing sponge available at many marine stores) in your bilge to remove oil from your bilge water. That way the oil will not be pumped overboard by your bilge pump. One pillow is generally effective for the entire boating season and can then be disposed of on shore. Be wary of bilge cleaners, which merely disperse the oil in bilge water.

3. Drain old antifreeze into a container for onshore disposal. (In some areas, antifreeze may be collected for recycling. Contact used-oil recyclers for more information.) Where possible, use less toxic propylene glycol mixtures rather than ethylene glycol antifreeze. Make sure you check the manufacturer's specifications to see if it can be used in your engine.

4. Avoid the temptation to top off your gas tank when refueling. Doing so frequently results in gasoline spilled from overflow vents, producing small but toxic slicks in the water. In many cases, a long dipstick can be used to check your gas level.

FOR OUTBOARDS MOTORS

ACTIONS

1. Use premium two-cycle, "N.M.M.A. - Certified" oil (designated with a TC-W II® or TC-W3® code) which burns ash-free and prevents carbon deposit formation. Use the oil and gasoline (octane level) recommended by your engine's manufacturer. If in doubt, talk with the mechanic who services your engine.

   Premium oils tend to contain more detergents and burn more cleanly. Clean burning is especially important for an engine that runs only intermittently (like an outboard fishing boat or sailboat auxiliary). If you use your engine only occasionally, add fuel conditioner to your gas to keep it from going stale.
2. Use a funnel with a filter when filling your gas tank. It keeps foreign material out of the engine and helps prevent spills.

3. If your engine does not have oil injection of any sort, carefully measure the oil you mix with your gasoline. Remember that too much oil in the gasoline means inefficient burning. Too little oil can cause significant engine damage.

4. Good care at the end of the season can help keep your outboard running well. Consider using a good professional service to winterize your engine.

5. For winter storage, add fuel stabilizer at storage concentrations (see product instructions) and mix the tank well. This will allow you to use all your fuel, and you won't encounter problems disposing of stale gas next spring.

FOR ANGLERS

Boating and fishing go together like ice cream and pie, and the number of people who fish from boats is in the tens of millions. Many conservation groups and state agencies are working to protect and maintain or grow fish stock, so observe all catch limits, size minimums and other restrictions on various species.

ACTIONS

1. Think about your needs ahead of time and keep only those fish you need for eating. Practice "catch and release" with the rest of the fish you catch.

2. Do not discard any fishing line overboard. Many tackle shops maintain line recycling programs, so turn it in.

3. Never stock fish or plants in public waters.

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